

## ABSTRACT

The present invention provides an improved method and system for training an on-line fuzzy inference network to generate a rule base, and a rule base generated thereby.

Tuning and applying a learning rule to the fuzzy rules generated by the fuzzy inference

5 network in such as manner as to divorce the performance of the network from the number of input dimensions allows the present invention to adapt a fuzzy inference network such as a SONFIN to be effective for the classification of high-dimensional data in problems requiring the use of a high number of dimensions such as occupant recognition in vehicles, weather forecasting, and economic forecasting.

10